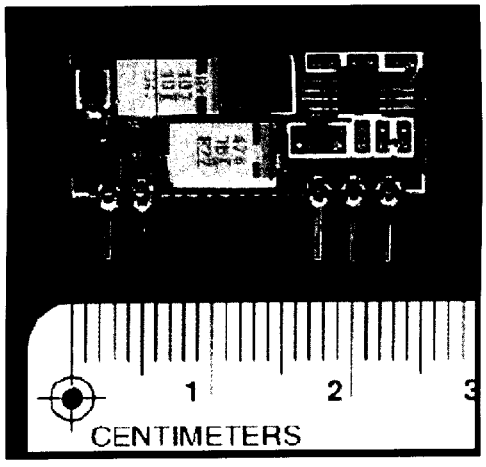

MiniPower 55S

DC to DC Converter

Congratulations! You have purchased the finest miniature Switch-Mode power supply for your projects. Due to its high efficiency this converter operates over the full life of one or two alkaline cells. By design, the MiniPower regulator discharges a battery under **constant-power, which provides for the most efficient use of the battery's energy**. Unlike shunt regulators, the MiniPower series do not function by wasting precious energy as heat, and will continue to provide power until the batteries are completely exhausted. By contrast, a typical linear shunt regulator providing 5V from a 9V "transistor" battery will not fully discharge the battery before falling out of regulation, while "throwing away" 4V as heat in the process. The typical 9V battery costs about twice as much, and has a fraction of the capacity of two AA-size cells. Your new MiniPower converter has been engineered with the finest components available to provide trouble-free performance.

FEATURES

- 5V Output ± 5%
- 80% Average Efficiency
  (1.8V to 3.1V input, Min to Max load)
- Low Switching Ripple, (< 35mV Typical)
- Low-Battery Output Flag
  (1.8V or 0.9V User Configurable)
- Low-Noise Anti-Ringing Feature
- Shielded Inductor for Low EMI
- Reversed-Battery Protection
- Over-Voltage-Transient Protection

PRELIMINARY

SPECIFICATIONS

(TA=+25 C)

PARAMETER	COND.	MIN	MAX
Input Voltage (1)			± 5V
Operating Voltage (2)		+ 0.9V	+ 5V
Output Voltage (Typical)	No Load 5V		± 5% (± 1%)
Max. Output Current 1.8 to 3.1V Input (2 Cells)	Vout= - 5%	40mA	80mA
0.9 to 1.5V Input (1 Cell)		10mA	30mA
Output Ripple (3) (Typical)	0.9V to 3.1V In		40mV (<35mV)
Switching Frequency		10 Hz	150 kHz
Low-Battery Trip	High to Low		1.8V ± 2%

1. Inputs greater than 5.3V applied longer than 0.5 sec. ***may cause damage!***
2. Startup at 0.9V with 10mA load. Operates to 0.7V with < 10mA load.
3. Output Ripple is very constant with input voltage and output load variation.

CONFIGURATION